

REMARKS

In view of the following discussion, the Applicants submit that none of the claims now pending in the application are unpatentable or anticipated under the provisions 35 U.S.C. §§ 112 and 102. The Applicants herein amend claims 1, 6, 8 and 11. Thus, the Applicants believe that all of these claims are now in allowable form.

I. REJECTION OF CLAIM 6 UNDER 35 U.S.C. § 112

The Examiner rejected claim 6 under 35 U.S.C. § 112, second paragraph as being indefinite. The Examiner asserts that the order of steps in view of claim 6 is logically unclear.

The Applicants herein amend claim 6 to recite a pre-identifying step that is different from the identifying step recited in claim 1 that is performed prior to the reception of the link failure based upon possible failure scenarios. Support for the amendment may be found in the Applicants' specification on paragraph [0057]. For example, the Applicants' invention may pre-calculate affected circuits, grouped by end switches for possible failure scenarios. Thus, when a link failure occurs that matches one of the pre-calculated failure scenarios, the system may simply pull relevant information from a switch memory. (See *Id.*). Therefore, the Applicants respectfully submit that claim 6 satisfies the requirements of 35 U.S.C. § 112 and request the rejection be withdrawn.

II. REJECTION OF CLAIMS 1-5 AND 7-11 UNDER 35 U.S.C. § 102

The Examiner rejected claims 1-5 and 7-11 as being anticipated by Doshi, et al. (U.S. Patent Publication No. 2004/0008619, published on January 15, 2004, hereinafter referred to as "Doshi"). The Applicants respectfully traverse the rejection.

Doshi teaches bundling messages in communication networks. When a failure occurs, a node may bundle received connection request over an alternate path. (See Doshi, Abstract, para. [0030] – [0036]).

The Examiner's attention is directed to the fact that Doshi fails to teach or to suggest the novel concept of a method, apparatus or computer readable medium for reducing signaling load in a communication network having a plurality of switches, comprising receiving a notification of a link failure at a switch adjacent to a link associated with said link failure and identifying, grouping and bundling by said switch, as positively claimed by Applicants' independent claims 1, 8 and 11. Specifically, Applicants' amended independent claims 1, 8 and 11 recite:

1. A method for reducing signaling load in a communication network having a plurality of switches, said method comprising the steps of:
receiving a notification of a link failure at a switch adjacent to a link associated with said link failure;
identifying a plurality of circuits affected by said link failure by said switch;
grouping affected circuits in accordance with one or more end-switches to which a plurality of signaling messages have to be sent by said switch; and
bundling said plurality of signaling messages by said switch.
(Emphasis added).

8. An apparatus for reducing signaling load in a communication network having a plurality of switches, said apparatus comprising:
a controller at a switch adjacent to a link associated with a link failure for receiving a notification of said link failure, and for identifying a plurality of circuits affected by said link failure, and for grouping affected circuits in accordance with one or more end-switches to which a plurality of signaling messages have to be sent, and for bundling said plurality of signaling messages. (Emphasis added).

11. A computer-readable medium having stored thereon a plurality of instructions, the plurality of instructions including instructions which, when executed by a processor, cause the processor to perform the steps comprising of:
receiving a notification of a link failure at a switch adjacent to a link associated with said link failure;
identifying a plurality of circuits affected by said link failure by said switch;

grouping affected circuits in accordance with one or more end-switches to which a plurality of signaling messages have to be sent by said switch; and
bundling said plurality of signaling messages by said switch.
(Emphasis added).

In one embodiment, the Applicants' invention teaches a method, apparatus or computer readable medium for reducing signaling load in a communication network having a plurality of switches, comprising receiving a notification of a link failure at a switch adjacent to a link associated with said link failure and identifying, grouping and bundling by said switch. For example, when a failure of a link is detected, a switch adjacent to the link that fails will group affected circuits with a common end switch. (See e.g., Applicants' specification, para. [0044] and [0049]). Subsequently, the switch bundles the messages for each circuit in the group into one or more signaling packets and sends the packet to the respective end switch. (See *Id.* at para. [0052]).

Doshi fails to anticipate the Applicants' invention because Doshi fails to teach or suggest a method, apparatus or computer readable medium for reducing signaling load in a communication network having a plurality of switches, comprising receiving a notification of a link failure at a switch adjacent to a link associated with said link failure and identifying, grouping and bundling by said switch. In considering the Examiner's response, the Applicants have amended the claims to recite a link failure rather than "a network event".

In view of the above amendment, the Applicants submit that Doshi teaches that when a failure occurs, a node not immediately adjacent to the failing link performs re-routing of connection requests. (See Doshi, para. [0030] – [0036]). For example, Doshi teaches when a link fails on L2, Node A (which is not adjacent to L2) bundles and forwards the connection requests to Node D. (See *Id.* and FIG. 1). Notably, "receiving connection requests" are not equivalent to a link failure. Thus, node A is not adjacent to the link failure detected in Doshi.

In contrast, the Applicants' invention teaches that a switch adjacent to a link associated with a link failure receives a notification and then performs the

identifying, grouping and bundling steps. Consequently, the bundled messages are propagated away from the failure to notify switches upstream.

Furthermore as previously argued, Doshi only teaches bundling connection requests that are already received by Node A (see Doshi, generally throughout), whereas Applicants' invention claims a plurality of circuits, where the multiple circuits may be carried over the same path or a different path (See e.g., Applicants' Table 1, circuit 131 and circuit 132). Consequently, when a link failure is detected, the switch must identify which circuits are affected by the link failing.

In contrast, Doshi does not need to perform such identifying step because Node A simply must re-route the connection requests already received. The Examiner asserts that A identifies connections to be torn down to node B in the Examiner's response. (See Office Action, p. 7, ll. 10-12). However, the Applicants note Doshi at best only identifies a single circuit (A-B-C) affected by the link failure unlike the Applicants' invention that identifies a plurality of circuits affected by said link failure.

In other words, Applicants' invention addresses the link failure from the perspective of the affected circuits and how the signaling messages pertaining to these affected circuits will be handled. Doshi simply re-routes connection requests already received by Node A when Node A realizes a first path is unavailable. Thus, Doshi also fails to teach or suggest identifying a plurality of circuits affected by said link failure by said switch. Therefore, Doshi clearly fails to anticipate the Applicants' independent claims 1, 8 and 11.

Moreover, dependent claims 2-5, 7, 9 and 10 depend from independent claims 1 and 8, respectively, and recite additional limitations. As such, and for the exact same reason set forth above, the Applicants submit that claims 2-5, 7, 9 and 10 are also patentable and not anticipated by Doshi. As such, the Applicants respectfully request the rejection be withdrawn.

CONCLUSION

Thus, the Applicants believe that all these claims are presently in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If, however, the Examiner believes that there are any unresolved issues requiring the issuance of a final action in any of the claims now pending in the application, it is requested that the Examiner telephone Mr. Kin-Wah Tong, Esq. at (732) 842-8110 x130 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully Submitted,

May 4, 2009

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